

REMARKS

Applicant has carefully reviewed the Office Action mailed February 20, 2007 and offers the following remarks to accompany the above amendments.

Before addressing the rejections, Applicant provides a brief summary of the present invention so that the remarks relating to the rejections are considered in the proper context. The present invention is directed to a mobile terminal that is capable of communication via a cellular-based network, as well as via the public switched telephone network (PSTN) or a packet network through a local wireless interface using a terminal adaptor, such that, a call originating from the cellular network is transitioned to the local wireless network. Accordingly, a primary emphasis of the present invention is establishing a new connection between the wireless switch, which is supporting the cellular call, and the mobile terminal through the terminal adaptor using the local wireless interface. Once the new connection is established, the call is transitioned to that new connection.

Claims 1-15 and 30-44 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Patent Office states that the phrase "remote terminal" was not mentioned in the Specification. Additionally, the Patent Office states that it is unclear what does the receiving in step a) and what does the providing in step c) of claims 1 and 30. Applicant respectfully traverses. Claims 1 and 30 have been amended to change "remote terminal" to "an entity" such that the call comprises a first connection from the wireless switch to the mobile terminal and a second connection between the wireless switch and an entity. Support may be found throughout the Specification, including at least p. 8, paragraph 0028, lines 21-23 and Figure 1A.

With respect to the Patent Office's assertion that it is unclear what does the receiving in step a) and what does the providing in step c) of claims 1 and 30, Applicant respectfully submits that claims 1 and 30 are clear under 35 U.S.C. § 112, first paragraph, and comply with the written description requirement even though they do not recite what specific entity does the receiving of step a) and the providing of step c). All that is recited by claim 1 is that steps a), b), and c) be done, not that they done by any specific entity. Claim 1 clearly recites the steps of the invention without specifying what does the steps. There is no requirement in a method claim that the claim recites which entity must perform the steps. With respect to claim 30, it is clear from the language of the claim that the control system receives the handoff request and that the

control system provides the handoff instruction. Thus, claim 30 is also clear under 35 U.S.C. § 112, first paragraph, and complies with the written description requirement.

Claims 1, 2, 7-15, 30, 31, and 36-44 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0147008 A1 to Kallio (hereinafter "Kallio"). Applicant respectfully traverses. For a reference to be anticipatory, the reference must disclose each and every claim element. Further, the elements of the reference must be arranged as claimed. MPEP § 2131. The requirement that each and every element be disclosed in the manner claimed is a rigorous standard that the Patent Office has not met in this case.

Applicant previously argued that Kallio does not teach each and every element of claim 1 (See Response filed December 11, 2006, pp. 3-5). Applicant reiterates those arguments and incorporates them by reference in this Response. In particular, Kallio does not teach a call comprising a first and a second connection, establishment of a third connection via a terminal adapter, and then providing a handoff instruction to the wireless switch to connect the second and third connections to effect handoff of the call from the cellular connection to the local wireless connection.

The Patent Office responds in part by taking the position that the language of claim 1 does not state that the third connection must be effected before the handoff. The Patent Office goes on to say that it is unclear what does the providing and the receiving steps. Further, the Patent Office states that it does not seem as though steps a) through c) of claim 1 must be performed in any particular order. Applicant respectfully submits that the Patent Office's interpretation of the claim is improper in light of the plain language of the claim.

Claim 1 recites a method for transitioning a call with a mobile terminal from a cellular connection to a local wireless connection, the method comprising:

- a) receiving a handoff request from a wireless switch supporting a call to the mobile terminal over a cellular access network, the call comprising a first connection from the wireless switch to the mobile terminal and a second connection between the wireless switch and an entity;
- b) effecting establishment of a third connection to the mobile terminal via a terminal adaptor, which supports local wireless communications with the mobile terminal; and
- c) providing a handoff instruction to the wireless switch to connect the second and third connections to effect handoff of the call from the cellular connection to the local wireless connection.

Applicant once again submits that claim 1 merely recites that steps a), b), and c) be done, not that they be done by any specific entity. Claim 1 clearly recites the steps of the invention without specifying what does the steps. There is no requirement in a method claim that the claim recites which entity must perform the steps. The claim recites that a handoff request is received from a wireless switch supporting a call having two connections, one between the mobile terminal and the wireless switch, and one between the wireless switch and an entity on the other end of the call. A third connection to the mobile terminal is established via a terminal adaptor. Thus, an instruction is provided to the wireless switch to connect the second and third connections to effect the requested handoff. Since the claim states that the second and third connections be connected "to effect handoff of the call," it is clear that the third connection does exist before the handoff occurs in the claimed invention. Thus, contrary to the Patent Office's position, the language of claim 1 does indicate that the third connection must be established before the handoff.

Using the proper interpretation of the claim, Kallio does not teach the establishment of a third connection to the mobile terminal via a terminal adaptor prior to handoff, and then connecting the third connection to the second connection in order to effect the handoff. Kallio discloses that when a handover algorithm in the base station subsystem (BSS) 110 indicates the need for a handover, a handover request is sent towards the mobile switching center (MSC) 120 and then delivered to the wireless mobile center (WMC) 210 (Kallio, paragraph 0049). If the WMC 210 is capable of handling the handover request, the WMC 210 sends an acknowledgement message and the handover procedure continues. The MSC 120 sends a handover command to the mobile station (MS) 150 via BSS 110. The MS 150 then contacts the WLAN radio and sends handover access or directly handover detect-message via the wireless LAN 200 and AGW 310 to the MSC 120. The MSC 120 then releases the reserved resources from the BSS 110 and the call is now in the wireless LAN 200. The MS 150 is handed over and starts to use the WLAN radio (Kallio, paragraph 0050). There is no teaching of establishing a third connection to the mobile terminal via a terminal adaptor prior to handoff, and then connecting the third connection to the second connection in order to effect the handoff, as recited in claim 1. Since Kallio does not teach each and every element of claim 1, Kallio does not anticipate claim 1.

Moreover, Kallio fails to teach that the handoff request is received from the wireless switch. In Kallio, the handover request is sent by the BSS 110 towards the MSC 120 (Kallio, paragraph 0049). Thus, the handover request is not from the wireless switch. The BSS 110 does include a base transceiver station (BTS) 112 and a base station controller (BSC) 114. However, neither of these is a wireless switch. The BSC 114 has a control computer, data communication facilities, and multiplexing/de-multiplexing equipment arranged to coordinate the overall operation of the base station equipment, but it is not a wireless switch. Thus, Kallio fails to teach that the handoff request is received from the wireless switch, as recited in claim 1. Kallio thus does not anticipate claim 1 for this additional reason.

Since Kallio does not disclose each and every element of claim 1, Kallio cannot and does not anticipate claim 1. Accordingly, claim 1 is allowable and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(e) is respectfully requested. Claim 30 is a system claim reciting the same elements as claim 1 in system format and, therefore, claim 30, is allowable for at least the same reasons as claim 1. Withdrawal of the rejection of claim 30 under 35 U.S.C. § 102(e) is respectfully requested. Additionally, claims 2 and 7-15, depend from claim 1, and claims 31 and 36-44 depend from claim 30. Therefore, claims 2, 7-15, 31, and 36-44 are allowable for at least the same reasons as claim 1. Withdrawal of the rejection of claims 2, 7-15, 31, and 36-44 under 35 U.S.C. § 102(e) is respectfully requested. Notwithstanding this, certain of the dependent claims require special mention.

Claims 2 and 31 recite that “the third connection is established in part between a wireline switch and the terminal adaptor.” The Patent Office argues that the WMC 210 is a wireline switch and cites to an element in Figure 1 labeled as WLAN access point with WMC SW WMC 210. Notwithstanding the letters “SW”, nothing in Figure 1 of Kallio indicates that the element numbered as 210 is a wireline switch. In fact, the element 210 in Figure 1 has only one line connected to it indicating that it does not perform any switching function. This is confirmed in Kallio. Kallio discloses that the WLAN, through a hotspot LAN, is connected only to the A-interface gate (AGW) 310 and the Intranet Location Register (ILR) 320. (Kallio, paragraph 0028). Additionally, Kallio, in numerous instances, describes the WMC 210 as part of the WLAN “arranged to serve as a WLAN access point.” (Kallio, Abstract). As a WLAN access point, the WMC 210 contains “one or more radio transceivers,” includes “authentication algorithms” to confirm user identity, includes a handover algorithm, and includes other software

for “providing the handover request and other handover messages.” (*Id.* at paragraphs 0029 and 0030). Clearly, therefore, the WMC 210 is not intended to be and, therefore is not, a wireline switch or any switch. In contrast, when Kallio refers to a switch, such as the MSC 120, Kallio clearly discloses the switching function. (*Id.* at paragraph 0026). Kallio does not refer to any switching function when describing the WMC 210.

The Patent Office argues that the WMC 210 is a wireline switch because it is capable of handing over communications between different networks, i.e., switching (Office Action mailed February 20, 2007, p. 4). As described in paragraph 0029 of Kallio, the WMC 210 may contain one or more mobile radio transceivers and software such as an authentication program for confirming the identity of the user and information necessary to allow the user to roam in different coverage areas of different technologies. However, just because the WMC 210 may contain information necessary to allow the user to roam in different coverage areas of different technologies does not mean that the WMC 210 actually does any switching. And certainly, given that the WMC 210 is a wireless mobile center, it certainly is a not a wireline switch. Therefore, WMC 210 in Figure 1 of Kallio is not the wireline switch of the claimed invention. Thus, the portion of Kallio cited by the Patent Office does not disclose a wireline switch or a third connection established between a wireline switch and the terminal adaptor. Since Kallio fails to disclose each and every element of claims 2 and 31, Kallio cannot and does not anticipate claims 2 and 31. Accordingly, claims 2 and 31 are allowable for this additional reason. Withdrawal of the rejection of claims 2 and 31 under 35 U.S.C. § 102(e) is respectfully requested.

Claims 7 and 36 recite that “the third connection is established in part over a packet network operatively coupled to the terminal adaptor.” The Patent Office cites to paragraph 0033 of Kallio to support the rejection of these claims (Office Action mailed February 20, 2007, p. 8). The cited portion of Kallio discloses only that the wireless LAN 200 and the GSM network may use different protocols and that the Mobile Station 150 “may adapt the different call control protocol.” (Kallio, paragraph 0033). There is no mention of a terminal adaptor and certainly no mention of “the third connection is established in part over a packet network operatively coupled to the terminal adaptor.” Since the cited portion of Kallio does not disclose a terminal adaptor or a third connection, or any connection, being “established in part over a packet network operatively coupled to the terminal adaptor,” Kallio fails to disclose each and every element of

claims 7 and 36, and Kallio does not anticipate claims 7 and 36. Accordingly, claims 7 and 36 are allowable. Withdrawal of the rejection of claims 7 and 36 under 35 U.S.C. § 102(e) is respectfully requested.

Claims 3 and 32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kallio in view of U.S. Patent No. 6,373,828 B1 to Stewart et al. (hereinafter “Stewart”). Applicant respectfully traverses. To establish *prima facie* obviousness, the Patent Office must show where each and every element of the claim is taught or suggested in the combination of references. MPEP § 2143.03. An obviousness inquiry requires looking at a number of factors, including the background knowledge possessed by a person having ordinary skill in the art, to determine whether there was an apparent reason to combine the elements of the prior art in the fashion claimed by the present invention. *KSR Int'l v. Teleflex, Inc.*, No. 04-1350, slip op. at 14 (U.S., Apr. 30, 2007). For the Patent Office to combine references in an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have combined the references. *Id.* at 15. If the Patent Office cannot establish obviousness, the claims are allowable.

Claim 3 depends from claim 2, which depends from claim 1. Claim 32 depends from claim 31, which depends from claim 30. Therefore, claims 3 and 32 contain all of the elements of claims 1 and 2, and 30 and 31, respectively. Claims 3 and 32 recite the additional limitation that the “handoff request is received and the handoff instructions are provided using a cellular protocol while the establishment of the third connection is effected using a public switched telephone network-based protocol.” As mentioned above, nothing in Kallio discloses a third connection. Accordingly, Kallio is deficient in teaching or suggesting providing the handoff instructions using cellular protocol or the establishment of a third connection via a terminal adaptor. This deficiency is not cured by combining Stewart with Kallio. The portions of Stewart cited by the Patent Office disclose a handoff between a MSC-based wireless communication system and a Generic C-based wireless communication system. (Stewart, Fig. 4; col. 7, lines 40-44; and col. 8, lines 45-52). Nothing in the portions of Stewart cited by the Patent Office teaches or suggests that the establishment of a third connection is effected using public switched telephone network-based protocol via a terminal adaptor. Therefore, the Patent Office has failed to show where each and every element of claims 3 and 32 is taught or suggested in the combination of Stewart with Kallio. Accordingly, the Patent Office has failed to establish *prima*

facie obviousness of claims 3 and 32 based on the combination of Stewart with Kallio and the rejection of claims 3 and 32 under 35 U.S.C. § 103(a) is improper making claims 3 and 32 allowable. Withdrawal of the rejection of claims 3 and 32 under 35 U.S.C. § 103(a) is respectfully requested.

In addition, the Patent Office has failed to provide a readily apparent reason why a person of ordinary skill in the art would have combined the references. The Patent Office contends that “[t]o one of ordinary skill in the art, it would have been obvious to modify Kallio with Stewart (sic) at the time of the invention such that the establishment of the third connection is effected using a public switched telephone network-based protocol, to provide a method of handing off communications from a cellular network to another wireless network (i.e. DECT).” (Office Action mailed February 20, 2007, pp. 10-11). Notwithstanding that the portions of Kallio or Stewart cited by the Patent Office do not disclose handing off communications from a cellular to a wireline network, nor do they disclose the establishment of a third connection via a terminal adaptor, the Patent Office must identify a reason why a person of ordinary skill in the art would have combined the references. *KSR Int’l v. Teleflex, Inc.*, No. 04-1350, slip op. at 15 (U.S., Apr. 30, 2007). The Patent Office has merely stated what would be the alleged result if Kallio and Stewart were combined; the Patent Office has not identified a reason why a person of ordinary skill in the art would have combined the references. Thus, the combination is not proper, and the rejection based on the combination should be withdrawn.

Further, Kallio discloses an intra-network handover process, one that is totally internal to the network architecture. Stewart, on the other hand, discloses an inter-network handover process that functions between a Generic C-based wireless network and a MSC-based wireless network. Therefore, to combine Stewart with Kallio, Stewart and/or Kallio would have to be modified. Any such modification, though, would destroy the intended purpose or function of that reference. Therefore, the modification is improper and a rejection based thereon is improper. *In re Gordon*, 733 F2d. 900, 902 (Fed. Cir. 1984). Accordingly, claims 3 and 32 are allowable for this additional reason.

Claims 4, 5, 33, and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kallio in view of U.S. Patent No. 6,243,581 B1 to Jawanda (hereinafter “Jawanda”). Applicant respectfully traverses. The standards for obviousness are set forth above.

Claims 4 and 33 recite that “the third connection is established in part between first and second media gateways, the first media gateway connected to the wireless switch via a cellular-based trunk and the second media gateway connected to the wireline switch via a public switched telephone network-based trunk, the method further comprising sending call initiation messages to the first and second media gateways and the wireline switch to establish the third connection.” The Patent Office states that Kallio teaches a first media gateway and cites to Figure 4 element number 310 “AGW,” but admits that Kallio does not teach a second media gateway connected to a wireline switch via a public switched telephone network-based trunk. The Patent Office, also, states that Jawanda teaches a second media gateway connected to a wireline switch via a public switched telephone network-based trunk. (Office Action mailed September 11, 2006, pp. 6 and 7). Claims 5 and 34 recite that “the first and second media gateways facilitate interworking between the cellular-based trunk and the public switched telephone network-based trunk over a packet network.”

The Patent Office contends that “Kallio teaches that a call initiation message is sent along the path from the serving network to the target network (Par. 49-50), so to a skilled artisan it would be obvious to do the same in the communication network of Jawanda such that the message would pass through the first and second gateway and the wireline switch to establish the third connection” (Office Action mailed February 20, 2007, p. 11). Once again, the Patent Office has merely stated what would be the alleged result if Kallio and Jawanda were combined. The Patent Office has failed to identify a reason why a person of ordinary skill in the art would have combined the references in the first place. *KSR Int’l v. Teleflex, Inc.*, No. 04-1350, slip op. at 15 (U.S., Apr. 30, 2007). Therefore, the combination is improper and the rejection based thereon is improper.

In addition, as discussed above, Kallio fails to teach each and every element of independent claims 1 and 30. Jawanda does not cure the deficiencies of Kallio in this regard. Therefore, the Patent Office has failed to establish *prima facie* obviousness of claims 4, 5, 33, and 34 based on the combination of Jawanda with Kallio. Thus, the rejection of claims 4, 5, 33, and 34 under 35 U.S.C. § 103(a) is improper, and, accordingly, claims 4, 5, 33, and 34 are allowable. Withdrawal of the rejection of claims 4, 5, 33, and 34 under 35 U.S.C. § 103(a) is respectfully requested.

Claims 6 and 35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kallio in view of U.S. Patent No. 6,181,938 B1 to Salmela et al. (hereinafter "Salmela"). Applicant respectfully traverses. The standards for obviousness are set forth above.

Claims 6 and 35 recite "the third connection is established using a directory number associated with the mobile terminal when supported via the terminal adaptor." The Patent Office cites to the Abstract of Salmela to support its argument "that it is well known in the art to use one primary number (i.e. mobile directory number) regardless of whether the terminal is located in one network or another." (Office Action mailed February 20, 2007, p. 12). In addition the Patent Office argues that it is "obvious that the third connection would be established using the directory number of the mobile terminal when supported via the terminal adaptor." *Ibid.* As mentioned above, Kallio does not teach or suggest the establishment of a third connection via a terminal adaptor. Since the portion of Salmela cited by the Patent Office does not teach or disclose a third connection via a terminal adaptor, combining Salmela with Kallio does not cure this deficiency. Therefore, the Patent Office has failed to show where each and every element of claims 6 and 35 is taught or suggested in the combination of Salmela with Kallio. Accordingly, the Patent Office has failed to establish *prima facie* obviousness of claims 6 and 35 based on the combination of Salmela with Kallio and, as such, the rejection of claims 6 and 35 under 35 U.S.C. § 103(a) is improper and claims 6 and 35 are allowable. Withdrawal of the rejection of claims 6 and 35 under 35 U.S.C. § 103(a) is respectfully requested.

The present application is now in condition for allowance and such action is respectfully requested. The Examiner is encouraged to contact Applicant's representative regarding any remaining issues in an effort to expedite allowance and issuance of the present application.

Respectfully submitted,

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